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Published to advance the Science of cold-blooded vertebrates

**NOTES ON CRAGIN'S DARTER,
CATONOTUS CRAGINI (GILBERT).**

From a small stream tributary to Big Sandy Creek at Lake Station, near Limon, Colorado, some 30 specimens of Cragin's Darter, *Catnotus cragini* (Gilbert), were obtained and many others seen on March 25, 1918.

These darters were in full breeding colors and the breeding season was evidently at its height, as eggs and sperm flowed freely from the adult individuals when they were taken from the seine. The darters were found in rather shallow water, less than three feet deep, in a small, spring-fed stream at the bottom of a small adobe canyon. The bottom of the particular part of the stream in which these fishes were spawning was covered with coarse gravel overlaid with fine silt. When undisturbed the darters moved about rapidly near the bottom, or rested motionless on the bottom, the males being very conspicuous because of their brilliant breeding colors and erect fins. If disturbed, however, the darters swam rapidly a short distance with the current and then plunged head first into the silt, completely burying themselves and concealing their exact locations by the clouds of muddy water stirred up while entering the silt.

The most conspicuous marking of the breeding males was a broad ventral band of bright yellow.

This band of ochraceous orange (Ridgway's Color Standards, 1912, 15 Y-O 5), covered from 10 to 12 rows of scales in the mid-ventral region, and extended from the bases of the ventral fins to the base of the tail. This broad, mid-ventral band was easily visible as the males moved about in the water, as the color extended over the first three or four rows of scales along each side of the ventral surface of the body. The branchiostegal region was also colored with this same ochraceous orange. A triangular space, however, bounded by the bases of the ventral and pectoral fins and the branchiostegal region showed little or no yellow, being of a pale cream color.

This colony of darters is peculiarly isolated in a very arid region. Big Sandy Creek into which the Lake Station stream flows, is a wet weather stream and is dry for the greater portion of the year. The Arkansas River, to which Big Sandy Creek is tributary, is the nearest permanent stream, but by river course the Arkansas is over 120 miles from the arroyo at Lake Station. These darters at Lake Station are confined therefore to the three or four miles of the small, spring-fed arroyo at Lake Station, and are completely cut off from the Arkansas River except during the spring run-off, as the arroyo loses itself in the dry sand bed of Big Sandy Creek a few miles from Lake Station. Free migration by way of Big Sandy Creek to and from the Arkansas River is possible therefore for a short period only during the spring run-off, and while this is in progress the water in Big Sandy Creek changes its level so frequently and is so muddy that the movements of these small fishes must be attended with considerable difficulty. The few localities from which Cragin's Darter has been reported previously are, however, Arkansas River localities, and these darters at Lake Station have evidently reached this arroyo country by way of Big Sandy Creek.

Associated with these darters in this small stream at Lake Station were the following species of fishes, each species being represented by a large number of individuals: *Catostomus commersonii sucklii* (Girard), *Campostoma anomalum* (Rafinesque), *Notropis scylla* (Cope), *Notropis lutrensis* (Baird and Girard), *Pimephales promelas* Rafinesque, *Fundulus zebrinus* (Jordan and Gilbert).

M. M. ELLIS,
B. B. JAFFA,
Boulder, Colorado.

CARETTA KEMPI IN JAMAICA.

Most of the specimens of the bastard turtle, *Caretta kemp*i (Garman), have been taken off the coast of the United States, either in the South Atlantic States, or the Gulf of Mexico.

Garman in his original description of *Colpochelys kemp*i, Bull. Mus. Comp. Zool. VI, 1860, p. 123, says that it is common in the Gulf off the Florida coast. O. P. Hay in the Proc. U. S. National Museum, XXXIV, 1908, p. 183-198, mentions specimens from Atlantic City, N. J., Beaufort, N. C., and Cape Hatteras, N. C. Strecker, 1915, "Reptiles and Amphibians of Texas," records a skull from Velasco on the Texas coast. Brimley, 1915, and Schmidt and Dunn, 1917, add nothing to our knowledge of the range. Stejneger and Barbour, in their recent checklist, give the range as "Northeastern part of the Gulf of Mexico north to Cape Hatteras, and accidentally to the coast of Massachusetts."

Therefore it is of interest that this turtle has been taken off Jamaica, which is a considerable extension of the range. On going over some skeletal material of turtles in the Smith College collection, I came across a skull of a sea turtle which is unquestionably *Caretta kemp*i, as it has the strong alveolar ridges in the upper jaw which begin as two prominent